

WHAT IS CLAIMED IS:

1. A method to control a relative position between a surface and a body to form a pattern in said surface, said method comprising:

sensing said relative position between said surface and said body; and

moving said body to obtain a desired spatial relationship to define a gap therebetween, while minimizing undesirable dimensional variations in said gap.

2. The method as recited in claim 1 wherein moving further includes positioning said body to extend parallel to said surface.

3. The method as recited in claim 1 wherein sensing further includes detecting said pattern produced by light impinging upon an interface of said body with said surface.

4. The method as recited in claim 1 wherein said body is coupled to be displaced along two orthogonal axes with a portion of said surface extending substantially parallel to a plane lying in said two orthogonal axes where moving further includes displacing said body to lie parallel to said plane.

5. The method as recited in claim 1 further including coupling said body to move about first and second axes and decoupling movement of said body about said first and second axes so that movement about one of said first

and second axes is substantially independent of movement about the remaining of said first and second axes.

6. The method as recited in claim 1 wherein moving further includes causing said body to undergo displacement with respect to a subset of said two orthogonal axes with said displacement being selected from a set of movements consisting of translation and rotation.

7. The method as recited in claim 1 further includes mounting said body to a flexure system having first and second axes of rotation and mounting said flexure member to an actuation system coupled to said flexure system and moving said body with said actuation system to arrange said body to be substantially parallel to a portion of said surface in superimposition therewith.

8. The method as recited in claim 1 further including disposing a formable material on said surface and contacting said formable material with said body and measuring a force of said contact.

9. The method as recited in claim 1 further including contacting said surface with said body and moving said body to be substantially parallel to a portion of said surface in superimposition therewith before contacting said surface with said body.

10. A method to control a relative position between a surface and a body to form a pattern in said surface, said method comprising:

sensing said relative position between said surface and said body;

moving said body to obtain a desired spatial relationship; and

after moving said body to obtain said desired spatial relationship, contacting said surface with said body.

11. The method as recited in claim 10 wherein sensing further includes detecting said pattern produced by light impinging upon said body and said surface to sense said relative position.

12. The method as recited in claim 10 wherein moving further includes positioning said body to extend parallel to a portion of said surface in superimposition therewith, said surface.

13. The method as recited in claim 10 wherein said body is coupled to be displaced along two orthogonal axes with a portion of said surface extending substantially parallel to a plane lying in said two orthogonal axes where moving further includes displacing said body to lie parallel to said plane.

14. The method as recited in claim 10 further including coupling said body to move about first and second axes and decoupling movement of said body about said first and second axes so that movement about one of said first and second axes is substantially independent of movement about the remaining of said first and second axes.

15. The method as recited in claim 10 wherein moving further includes causing said body to undergo displacement with respect to a subset of two orthogonal axes with said displacement being selected from a set of movements consisting of translation and rotation.

16. The method as recited in claim 10 further including mounting said body to a flexure system having a first flexure member defining first and second axes of rotation and mounting said flexure member to an actuation system coupled to said flexure system and moving said body with said actuation system body arrange said body to be substantially parallel to a portion of said surface in superimposition therewith.

17. A method to control a relative position between a surface and a body to form a pattern in said surface, said method comprising:

sensing said relative position between said surface and said body by detecting a fringe pattern produced by light impinging upon said body and said surface; and

moving said body to obtain a desired spatial relationship to define a gap therebetween while minimizing undesirable dimensional variations in said gap.

18. The method as recited in claim 17 wherein said body is coupled to be displaced along two orthogonal axes with a portion of said surface extending substantially parallel to a plane lying in said two orthogonal axes where moving further includes displacing said body to lie parallel to said plane.

19. The method as recited in claim 18 further including decoupling movement of said body with respect to said two orthogonal axes so that movement about one of said two axes is substantially independent of movement about the remaining of said two axes.

20. The method as recited in claim 19 wherein said movement is selected from a set of movements consisting of translation and rotation.

21. The method as recited in claim 20 further including mounting said body to a flexure system having first and second axes of rotation and mounting said flexure member to an actuation system coupled to said flexure system and moving said body with said actuation system to arrange said body to be substantially parallel to a portion of said surface in superimposition therewith.